

COLLOQUIUM

Date: Wednesday, October 31, 2018
Time: 4:00 – 5:0 pm
Location: Wilder Auditorium, Knight Physics Building

Speaker:

Prof. Zenghu Chang, University of Central Florida

The Title:

From Chirped Pulse Amplification to Attosecond X-rays

Abstract:

Chirped Pulse Amplification (CPA) was demonstrated in 1985 by Donna Strickland and Gerard Mourou, for which a portion of the 2018 Noble Prize in Physics has been awarded to them. CPA is a revolutionary technique to achieve both ultrashort laser pulse duration and unprecedented light intensity. The applications of CPA lasers to atomic physics study has opened a new research area: attosecond (10^{18} s) science. Recently, 50-as soft X-ray pulses at the carbon K-edge (280 eV) have been produced in our laboratory using the latest generation CPA lasers, which may open the door for observing electron dynamics in atoms, molecules and condensed matter.

Biography:

Zenghu Chang is a University Trustee Chair, Pegasus and Distinguished Professor at the University of Central Florida, where he directs the Institute for the Frontier of Attosecond Science and Technology. He is a fellow of the American Physical Society and Optical Society of America. Chang graduated from Xi'an Jiao-tong University in 1982. He then earned a doctorate at the Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, in 1988. From 1991 to 1993, Chang visited the Rutherford Appleton Laboratory sponsored by the Royal Society fellowship. He worked at the University of Michigan after 1996. Then joined the physics faculty at Kansas State University in 2001. Chang moved to the University of Central Florida in Orlando in 2010. He is the author of the book "Fundamentals of Attosecond Optics."